# Materials List for:

## Fabricating Superhydrophobic Polymeric Materials for Biomedical Applications

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<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Catalog Number</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicone oil</td>
<td>Sigma-Aldrich</td>
<td>85409</td>
<td></td>
</tr>
<tr>
<td>Cis-2-Phenyl-1,3-dioxan-5-ol</td>
<td>Sigma-Aldrich</td>
<td>13468</td>
<td></td>
</tr>
<tr>
<td>Benzyl bromide</td>
<td>Sigma-Aldrich</td>
<td>B17905</td>
<td>Toxic, lacrymator/eye irritant, use in chemical fume hood</td>
</tr>
<tr>
<td>Potassium hydroxide</td>
<td>Sigma-Aldrich</td>
<td>221473</td>
<td>Corrosive</td>
</tr>
<tr>
<td>Rotary evaporator</td>
<td>Buchi</td>
<td>R-124</td>
<td></td>
</tr>
<tr>
<td>High-vacuum pump</td>
<td>Welch</td>
<td>8907</td>
<td></td>
</tr>
<tr>
<td>Nitrogen, ultra high purity</td>
<td>Airgas</td>
<td>NI UHP300</td>
<td>Compressed gas</td>
</tr>
<tr>
<td>Tetrahydrofuran, stabilized with BHT</td>
<td>Pharmaco-Aaper</td>
<td>346000</td>
<td>Flammable. Dried through column of XXX</td>
</tr>
<tr>
<td>Dichloromethane</td>
<td>Pharmaco-Aaper</td>
<td>313000</td>
<td>Flammable, toxic.</td>
</tr>
<tr>
<td>Separatory funnel (1 L)</td>
<td>Fisher Scientific</td>
<td>13-678-606</td>
<td></td>
</tr>
<tr>
<td>Sodium sulfate</td>
<td>Sigma-Aldrich</td>
<td>239313</td>
<td></td>
</tr>
<tr>
<td>Ethanol, absolute</td>
<td>Pharmaco-Aaper</td>
<td>111USP200</td>
<td>Flammable, toxic.</td>
</tr>
<tr>
<td>Buchner funnel</td>
<td>Fisher Scientific</td>
<td>FB-966-F</td>
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<tr>
<td>Methanol</td>
<td>Pharmaco-Aaper</td>
<td>339000ACS</td>
<td>Flammable, toxic.</td>
</tr>
<tr>
<td>Hydrochloric acid</td>
<td>Sigma-Aldrich</td>
<td>320331</td>
<td>Corrosive. Diluted to 2N in distilled water.</td>
</tr>
<tr>
<td>Ethyl chloroformate, 97%</td>
<td>Sigma-Aldrich</td>
<td>185892</td>
<td>Toxic, flammable, harmful to environment</td>
</tr>
<tr>
<td>Triethylamine (anhydrous)</td>
<td>Sigma-Aldrich</td>
<td>471283</td>
<td>Toxic, flammable, harmful to environment</td>
</tr>
<tr>
<td>Diethyl ether</td>
<td>Pharmaco-Aaper</td>
<td>373ANHACS</td>
<td>Highly flammable. Purified through XXX column.</td>
</tr>
<tr>
<td>3,6-Dimethyl-1,4-dioxane-2,5-dione (D,L-lactide)</td>
<td>Sigma-Aldrich</td>
<td>303143</td>
<td></td>
</tr>
<tr>
<td>Tin (II) ethylhexanoate</td>
<td>Sigma-Aldrich</td>
<td>S3252</td>
<td>Toxic.</td>
</tr>
<tr>
<td>ε-caprolactone (97%)</td>
<td>Sigma-Aldrich</td>
<td>704067</td>
<td></td>
</tr>
<tr>
<td>Toluene, anhydrous</td>
<td>Sigma-Aldrich</td>
<td>244511</td>
<td>Flammable, toxic.</td>
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<tr>
<td>Glass syringe</td>
<td>Hamilton Company</td>
<td>1700-series</td>
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</tr>
<tr>
<td>Deuterated chloroform</td>
<td>Cambridge Isotopes Laboratories, Inc.</td>
<td>DLM-29-10</td>
<td>Toxic</td>
</tr>
<tr>
<td>Nuclear magnetic resonance instrument</td>
<td>Varian</td>
<td>V400</td>
<td></td>
</tr>
<tr>
<td>Palladium on carbon catalyst</td>
<td>Strem Chemicals, Inc.</td>
<td>46-1707</td>
<td></td>
</tr>
<tr>
<td>Hydrogenator unit</td>
<td>Parr</td>
<td>3911</td>
<td></td>
</tr>
<tr>
<td>Material/Equipment</td>
<td>Supplier</td>
<td>Catalog/Part Number</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>----------</td>
<td>---------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Hydrogenator shaker vessel</td>
<td>Parr</td>
<td>66CA</td>
<td></td>
</tr>
<tr>
<td>Hydrogen</td>
<td>Airgas</td>
<td>HY HP300</td>
<td>Highly flammable.</td>
</tr>
<tr>
<td>Diatomaceous earth</td>
<td>Sigma-Aldrich</td>
<td>22140</td>
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</tr>
<tr>
<td>2H,2H,3H,3H-perfluorononanoic acid</td>
<td>Oakwood Products, Inc.</td>
<td>10519</td>
<td>Toxic.</td>
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<tr>
<td>Stearic acid</td>
<td>Sigma-Aldrich</td>
<td>S4751</td>
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<tr>
<td>N,N′-dicyclohexylcarbodiimide</td>
<td>Sigma-Aldrich</td>
<td>D80002</td>
<td>Toxic, irritant.</td>
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<tr>
<td>4-(dimethylamino) pyridine</td>
<td>Sigma-Aldrich</td>
<td>107700</td>
<td>Toxic.</td>
</tr>
<tr>
<td>Hexanes</td>
<td>Pharmaco-Aaper</td>
<td>359000ACS</td>
<td>Toxic, flammable.</td>
</tr>
<tr>
<td>Gel permeation chromatography (GPC) system</td>
<td>Rainin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GPC column</td>
<td>Waters</td>
<td>WAT044228</td>
<td></td>
</tr>
<tr>
<td>Differential scanning calorimeter</td>
<td>TA Instruments</td>
<td>Q100</td>
<td></td>
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<tr>
<td>Chloroform</td>
<td>Pharmaco-Aaper</td>
<td>309000ACS</td>
<td>Toxic.</td>
</tr>
<tr>
<td>N,N-dimethylformamide</td>
<td>Sigma-Aldrich</td>
<td>227056</td>
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<tr>
<td>Polycaprolactone, MW 70-90 kg/mol</td>
<td>Sigma-Aldrich</td>
<td>440744</td>
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<tr>
<td>Poly(lactide-co-glycolide), MW 136 kg/mol</td>
<td>Evonik Industries</td>
<td>LP-712</td>
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<tr>
<td>10 ml glass syringe</td>
<td>Hamilton Company</td>
<td>81620</td>
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</tr>
<tr>
<td>18 AWG blunt needle</td>
<td>BRICO Medical Supplies</td>
<td>BN1815</td>
<td></td>
</tr>
<tr>
<td>Electrosniper enclosure box</td>
<td>Custom-built</td>
<td>N/A</td>
<td>Made of acrylic panels</td>
</tr>
<tr>
<td>High voltage DC supply</td>
<td>Glassman High Voltage, Inc.</td>
<td>PS/EL30R01.5</td>
<td>High voltages, electrocution hazard</td>
</tr>
<tr>
<td>Linear (translating) stage</td>
<td>Servo Systems Co.</td>
<td>LPS-12-20-0.2</td>
<td>Optional</td>
</tr>
<tr>
<td>Programmable motor &amp; power supply</td>
<td>Intelligent Motion Systems, Inc.</td>
<td>MDrive23 Plus</td>
<td>Optional</td>
</tr>
<tr>
<td>24V DC motor &amp; power supply</td>
<td>McMaster-Carr</td>
<td>6331K32</td>
<td>Optional</td>
</tr>
<tr>
<td>Aluminum collector drum</td>
<td>Custom-built</td>
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<td>Optional</td>
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<tr>
<td>Syringe pump</td>
<td>Fisher Scientific</td>
<td>78-0100I</td>
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<tr>
<td>Inverted optical microscope</td>
<td>Olympus</td>
<td>IX70</td>
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<tr>
<td>Scanning electron microscope</td>
<td>Carl Zeiss</td>
<td>Supra V55</td>
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<tr>
<td>Conductive copper tape</td>
<td>3M</td>
<td>16072</td>
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<tr>
<td>Aluminum SEM stubs</td>
<td>Electron Microscopy Sciences</td>
<td>75200</td>
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<tr>
<td>Contact angle goniometer</td>
<td>Kruss</td>
<td>DSA100</td>
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<tr>
<td>Propylene glycol</td>
<td>Sigma-Aldrich</td>
<td>W294004</td>
<td>Toxic.</td>
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<tr>
<td>Ethylene glycol</td>
<td>Sigma-Aldrich</td>
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<td>Toxic.</td>
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<tr>
<td>Ioxaglate</td>
<td>Guerbet</td>
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<tr>
<td>Fetal bovine serum</td>
<td>American Type Culture Collection</td>
<td>30-2020</td>
<td></td>
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<tr>
<td>Micro-computed tomography instrument</td>
<td>Scanco</td>
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<tr>
<td>Image analysis software (Analyze)</td>
<td>Mayo Clinic</td>
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<tr>
<td>Tensile tester</td>
<td>Instron</td>
<td>5848</td>
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<tr>
<td>Micrometer</td>
<td>Multitoyo</td>
<td>293-340</td>
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<tr>
<td>Calipers</td>
<td>Fisher Scientific</td>
<td>14-648-17</td>
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